

PREVENTING SILICIDE FORMATION AT THE GATE
ELECTRODE IN A REPLACEMENT METAL GATE TECHNOLOGY

Abstract of the Disclosure

A hard mask may be formed and maintained over a polysilicon gate structure in a metal gate replacement technology. The maintenance of the hard mask, such as a 5 nitride hard mask, may protect the polysilicon gate structure 14 from the formation of silicide or etch byproducts. Either the silicide or the etch byproducts or their combination may block the ensuing polysilicon etch which is needed to remove the polysilicon gate structure 10 and to thereafter replace it with an appropriate metal gate technology.